

**IN THE CLAIMS:**

Please cancel claims 1 and 2 and amend claim 3 as follows.

1. (Cancelled)

2. (Cancelled)

3. (Currently Amended) ~~A program for computing finite impulse response (FIR) filter coefficients embodied on a computer readable medium, the program causing a computer to execute~~A finite impulse response (FIR) filter design apparatus using a computer, the computer executing the steps of:

determining every element of a single-dimension array  $B'$  using a filter order  $N$  of a universal maximally flat FIR filter which has a characteristic of maximizing the smoothness, a number of zeros  $K$  at  $z=-1$ , and a parameter  $d$  for a group delay at  $z=1$ , by changing in sequence an index  $j$  from 1 to  $N-K$  in a recurrence formula  $B'[j] = (-1) \times \{(2d)B'[j-1] + (j-1)B'[j-2]\} / (N - j + 1)$ , the single-dimension array having  $N+1$  elements  $B'[j]$  where  $0 \leq j \leq N$ , in which an element  $B'[0]$  thereof is initialized to 1 and all the elements thereof except the element  $B'[0]$  are initialized to zero

wherein  $N$  is a positive integer ~~of a universal maximally flat FIR filter~~,  $K$  is an integer equal to or more than zero,  $d$  is a rational number, and  $N$ ,  $K$ , and  $d$  are provided by inputs;

determining every element of a three-dimension array  $r$  by sequentially changing, in the order of indexes  $j, i, p$ , an index  $j$  from 0 to  $N-p$ , and an index  $i$  from 0 to  $p$ , an index  $p$  from 1 to  $N$  in a recurrence formula  $r[p,i,j] = ( r[p-1,i-1,j] - r[p-1,i-1,j+1] ) / 2 + ( r[p-1,i,j] + r[p-1,i,j+1] ) / 2$ , the three-dimension array  $r$  having  $(N+1)^3$  elements  $r[p,i,j]$  where  $0 \leq p \leq N, 0 \leq i \leq N, 0 \leq j \leq N$ , in which elements  $r[0,0,j]$  thereof where  $0 \leq j \leq N-K$  are initialized to elements of the single-dimension array  $B'[j]$  where  $0 \leq j \leq N-K$ , and all the elements thereof except the elements  $r[0,0,j]$  are initialized to zero; and

extracting elements  $r[N,i,0]$  of the three-dimension array  $r$  where  $0 \leq i \leq N$  as the impulse response coefficients of the universal maximally flat FIR filter.